evon evolution in automation

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VMIS 2.0

The new traffic management system for Austria's tolled motorway network

evon is part of the consortium to build the new traffic management system for Austria's tolled motorway network

As part of the Swiss-German-Austrian consortium, evon has been awarded a major contract to implement the new core traffic management system for the Austrian tolled motorway network by the government-owned operator, ASFINAG Maut Service.

The Austrian government gave the go-ahead for the new Traffic Management and Information System 2.0 (VMIS 2.0) Core System and Operating GUI (Graphical User Interface) in April 2018, and the ARGE VMIS-EHE consortium has won the tender.

This is one of the world's largest traffic management projects, and when completed, the VMIS 2.0 system will form the basis for further/future vehicle-to-infrastructure (V2I) communications sub-systems. The winning consortium consists of: EBP Schweiz (Switzerland), Heusch/ Boesefeldt (Germany) and evon (Austria). The consortium and project management

will be led by EBP Deutschland from its offices in Berlin, Germany.
To appreciate the complexity of the project, the consortium notes that more than 33,000 traffic control devices will be integrated into the new system, over a total road length of 1,356 miles (2,183km). This includes approximately 170 tunnels. In future, more than 200 ASFINAG employees will ensure the highest possible level of traffic flow on Austria's main road arteries through their use of VMIS 2.0 and its GUI at nine regional traffic management centers.

The central focus of the VMIS 2.0 contract is on the development, commissioning, migration, operation and continued development of the core traffic management system, and the unified operating graphical interface for all traffic management centers operated by ASFINAG.

One important aspect of replacing the existing systems will be the seamless and uninterrupted migration to the new systems with uninterrupted operation. The contract also stipulates that not only the development, commissioning and migration is part of the works, but also the further development of the traffic-related core system and the operator GUI. This includes continuous maintenance, as well as the continuous further development of the VMIS 2.0 system. The planned service life of VMIS 2.0 is 17 years.
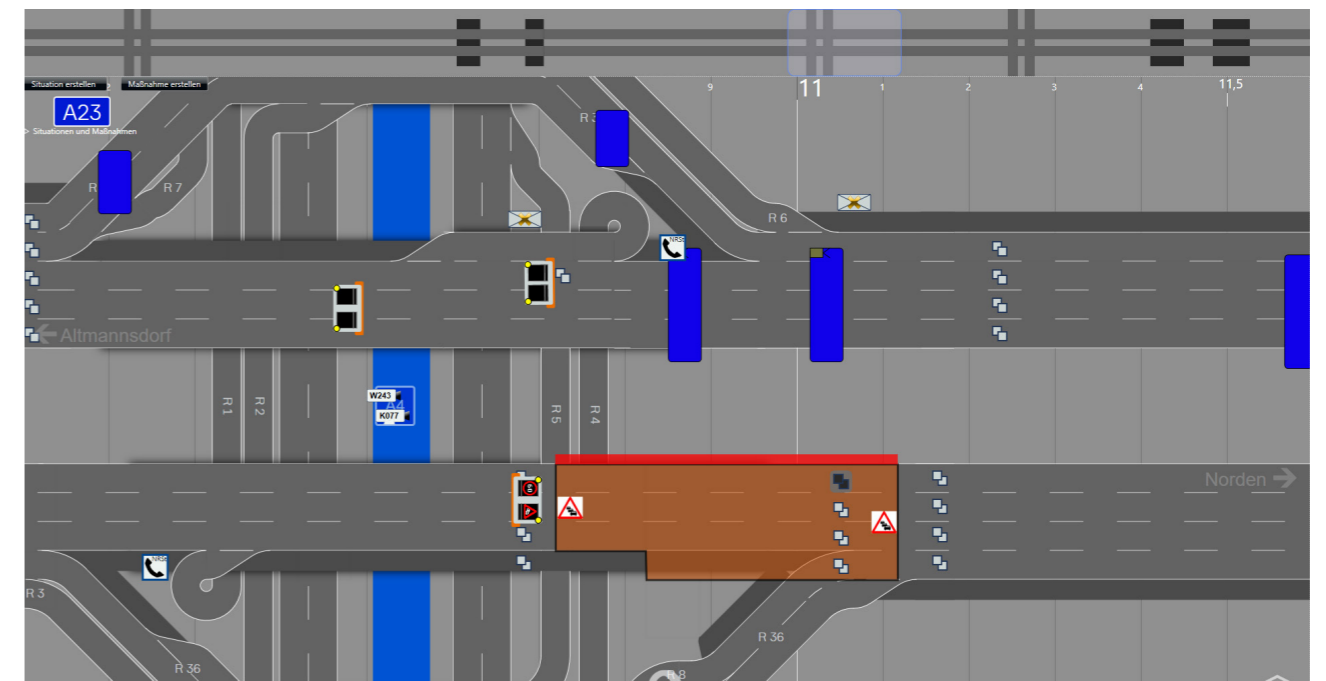
Agile Development

The agile development is based on the V-Model XT between client and contractors. Milestones are done in iterations and end with an acceptance (SCRUM sprints).

Goals of iterations and sprints are defined in advance. The close collaboration in workshops is part of the successive realization of specifications and developments. The whole process is open for rapid changes by considering functional vs. technical adjustments.

HIGHLIGHTS
→ Integration: 169 tunnels, approx. 2,200 km highway, approx. 33,000 open road utilities, > 6,500,000 datapoints
→ Combined operator GUI for all roles and systems
→ Big Data & AI
→ Car 2 X
→ Monitoring, control, configuration and parametrization of roadside equipment
→ Comprehensive automation of systems using a new control model

New Control Model: Sensor, Situation, Action, Actuator.

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